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INVESTIGATORS SELECTED FOR SECOND SPACELAB FLIGHT

Fifty-nine scientists have been selected to participate in the second Spacelab flight scheduled to be launched into Earth orbit aboard NASA's Space Shuttle in 1981.

Forty-seven of the scientists will represent the United States and 12 the United Kingdom.

The group was chosen by NASA from more than 1,000 candidates who responded to invitations to participate in the

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The primary objective of the second Spacelab flight is to verify the performance of Spacelab systems and subsystems, and to measure the environment surrounding the Space Shuttle.

The secondary objective is to obtain scientific, applications and technology data and to demonstrate the broad capability of Spacelab to perform space research. Astronomy, high energy astrophysics and solar physics research will be emphasized on this flight. Experiments will also be performed in plasma physics, botany and medicine.

Spacelab 2 will consist of four 3-meter (10-foot) pallet segments exposed to space in the Orbiter cargo bay. In addition to serving as a mounting platform for the experiment instrumentation, the pallets will provide power, thermal conditioning, data and other services to the instruments.

Marshall Space Flight Center, Huntsville, Ala., has the lead center role for NASA in the Spacelab development program and has also been assigned the payload mission management responsibility for the first three Spacelab missions. The European Space Agency (ESA) is responsible for the construction of Spacelab.

Spacelab 2 will be launched from NASA's Kennedy Space Center, Fla., and will remain in the Shuttle Orbiter's cargo bay as it orbits the Earth for up to 11 days at an altitude of about 400 kilometers (250 miles) with an inclination of 57 degrees.

After the Space Shuttle Orbiter reaches its proper orbit, the necessary Spacelab systems will be activated and tested for proper operations. Then the scientists aboard the spacecraft (called payload specialists), working with the Orbiter crew and the scientific and technical investigators on the ground, will perform various experiments until shortly before the Spacelab systems are shut down in preparation for returning to the landing site. The two payload specialists, operating from the Orbiter's aft flight deck, will work complementary shifts so that scientific experimentation can continue 24 hours a day.

The Solar Terrestrial Division in NASA's Office of Space Science has overall management responsibility for the Spacelab 2 payload. W. R. Witt, Jr., is the program manager and Dr. J. D. Rosendhal is program scientist. The Marshall Center, has been assigned project management responsibility, with R.E. Pace as mission manager and R. C. Lester as assistant mission manager. Dr. E. W. Urban is the mission scientist.

The experiment complement is expected to provide new scientific results in a number of areas. In astrophysics, information will be obtained on technical composition of very high energy cosmic rays, on the spatial distribution of X-ray emitting material in clusters of galaxies, on the existence of diffuse, cool objects in our own galaxy, on the abundance of helium in the Sun and on the time evolution of small scale solar features and the possible relation between changes in solar velocity and magnetic fields.

Spacelab and the Space Shuttle are capable of carrying large, massive instruments (cosmic ray physics, X-ray astronomy), for optimizing combinations of instruments to study specific problems (solar physics) for using instrumentation requiring the physical return of data and equipment (solar physics, infrared astronomy), for using man as an integral part of the experiment control system (solar physics) and for using the Shuttle itself as part of an active experiment (space plasmas).

The principal investigators and their research areas are as follows:

Dr. Alan Gabriel, Appleton Laboratory, Abingdon, Oxfordshire, United Kingdom, Solar Coronal Helium Abundance;

Dr. Guenter Brueckner, U.S. Naval Research Laboratory, Washington, D.C., Solar Ultraviolet High Resolution Spectroscopy;

Dr. Alan M. Title, Lockheed Solar Observatory, Palo Alto, Calif., Solar Magnetic and Velocity Field Measurements;

Dr. Peter Meyer, University of Chicago, Studies of Cosmic Ray Nuclei;

Dr. Michael Mendillo, Boston University and Dr. Aldo da Rosa, Stanford University, Palo Alto, Calif., Ionospheric Plasma Depletion Experiments;

Dr. Stanley Shawhan, University of Iowa, Plasma Diagnostics from an Ejected Subsatellite;

Dr. Giovanni Fazio, Smithsonian Astrophysical Observatory, Cambridge, Mass., Infrared Astronomy With a Helium-Cooled Telescope;

Professor Peter Willmore, University of Birmingham, United Kingdom, X-ray Imaging of Extended X-ray Sources;

Dr. Heinrich Schnoes, University of Wisconsin, Vitamin D Metabolism of Flight Crew Members;

Dr. Joe Cowles, University of Houston, Plant Lignification Studies.